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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/779,475

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Alain Chapuis

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7590

06/29/2005

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EXAMINER

PATEL, RAJNIKANT B

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/779,475	<b>Applicant(s)</b> CHAPUIS, ALAIN	
	<b>Examiner</b> Rajnikant B. Patel	<b>Art Unit</b> 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley (U.S. patent # 6,683,494) in combination with Melanson (U.S. Patent # 5,079,498)

Stanley discloses claimed invention a switch mode power supply (figure 1-4), including a digital controller (column 2, line 60-65), an analog-to-digital converter ((column 2, line 55-60), a linear region (column 10, line 30-50), an error signal (column 14, line 1-35), a digital pulse width modulator (column 14, line 40-65). However Stanley does not disclose the utilization of the technique for digital filter. Melanson teaches the utilization of the similar technique for digital filter. It would have been obvious one having an ordinary skill in the art at the time at the time the invention made to modify Stanley's invention by utilizing the technique taught by Melanson for the purpose of improve the efficiency of the power supply.

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2. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimamori (U.S. patent # 6,163,143) in combination with Cleasby et al. (U.S. Patent # 5,079,498) and further in combination with Chu et al. (U.S. patent # 5,229,699).

Shimamori discloses claimed invention a switched mode power supply (figure 2-5, 6A and 6B), including at least power switch (figure 4, item 13), a digital controller (column 2, line 30-35), an analog to digital converter (figure 4, item 35), a digital filter (figure 4 item 50), an error controller (column 18, line 55-60), a pulse width modulator (figure 4, item 11), infinite response filter (column 9, line 65-66), a transfer function (column 9, line 50-65). Shimamori does not disclose the utilization of the technique for digital pulse width modulator and positive and negative high and low range limiter, mathematical overflow of digital filter. Cleasby et al. teaches the utilization of similar technique for digital pulse width modulator (figure 6, item 14) and Chu et al. teaches the utilization of similar technique for high and low range limiter and calculating overflow of digital filter (figure 2 and 4). It would have been obvious one having an ordinary skill in the art at time the invention was made to modify Shimamori's power supply by utilizing the technique taught by Cleasby et al. and Chu et al. for the purpose of providing a stable and accurate control over the current output.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11

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F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-25 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of U.S. Patent No. 6,850,046. Although the conflicting claims are not identical, they are not patentably distinct from each other because the both sets of the claims are drawn to the switch mode power supply, including utilization of at least one power switch, a digital controller, measuring output parameter of power supply, an analog to digital converter, a digital filter and digital and digital pulse width modulator providing a control signal to the at least one power switch.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rajnikant B. Patel whose telephone number is 571-272-2082. The examiner can normally be reached on 6.30-5.00; m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rajnikant B Patel  
Primary Examiner  
Art Unit 2838